NAGDCA
THE VOICE OF PUBLIC PLAN SPONSORS

Quantifying the Effects of Pension Reform on Public Employee Benefits

Author: Matthew Petersen, Executive Director, NAGDCA

Introduction

Compensation in public sector employment has traditionally been understood as a tradeoff between lower wages and higher benefits. Retiree health care and a DB pension are two tools commonly used by public employers to attract and retain talent. However, several factors in recent years have forced governments to reevaluate the cost of providing these benefits. Increased longevity, demographic changes, and several economic and market shocks have increased pressure on governments to adequately fund their DB plans.

The cost of DB plan funding is a topic of nearly constant discussion and has led almost every state and many localities to reform their retirement systems in recent years[1]. While the impact of plan costs is widely debated, the impact of reduced benefits caused by pension reform is rarely—if ever—mentioned[2]. Understanding the impact of DB benefit reform is essential for government leaders, and especially for DC plan administrators who are responsible for helping employees save on their own for retirement.

In this report, we explore changes in DB plans and consider why the changing nature of public retirement systems should create a new paradigm for retirement savings; one in which DB and DC plans are seen and treated as complementary tools for achieving retirement security.

Key Takeaways

- **Defined benefit (DB) pension plans remain the primary retirement vehicle in the public sector, though most governments have reformed their retirement benefits over the last 20 years.**
- **While the effects of reform on the expected DB plan benefits have rarely been systematically quantified, this report shows that median reforms have resulted in a 15% benefit reduction.**
- **The effects of most of these reforms are yet to be felt by retirees.**
- **Understanding the increasingly important role of defined contribution (DC) plans in public sector retirement systems is essential to future employee retirement security.**

Explanation of Data

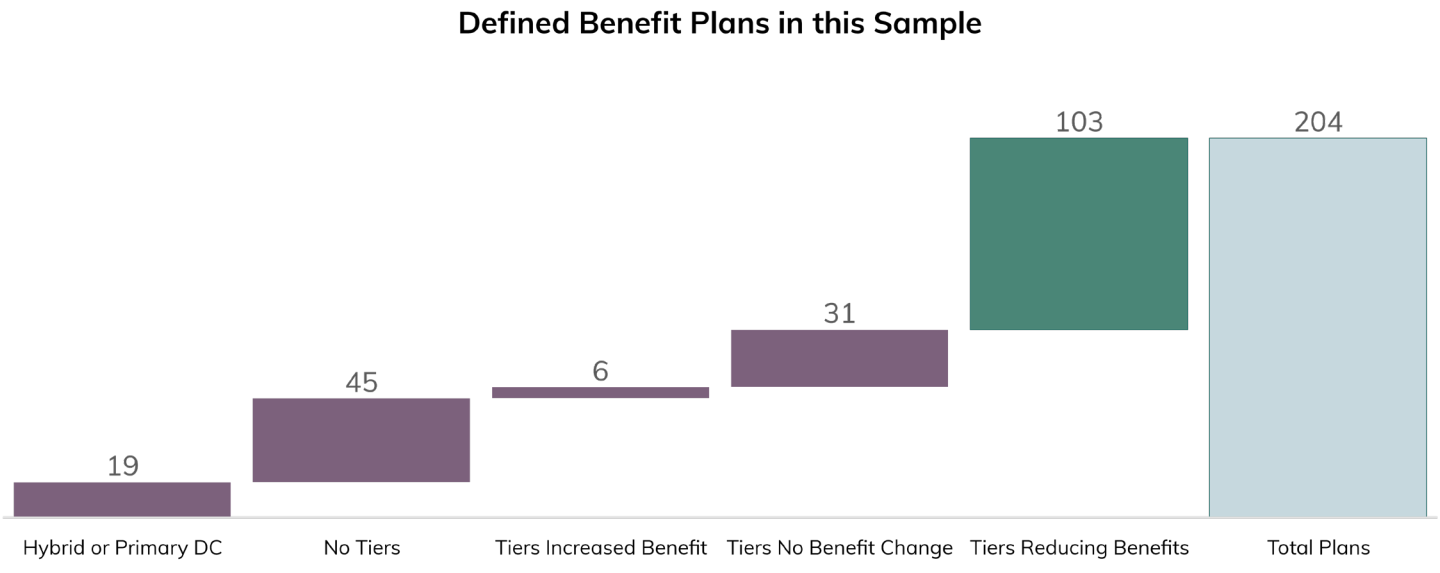
To start, we analyzed 204 public sector retirement systems[3], representing a wide cross-section of public employees at the state and local level. While the exact number of employees represented in this sample is unknown, participant data is available for 135 of the plans in the Center for Retirement Research's Public Plans Database. The 135 plans represent nearly 11 million active public employees[4], or roughly half of the 20 million employees currently working in state and local government[5]. Therefore, the 204 plans in the full sample likely cover most people employed in state and local government.

Our data skews toward large plans, which may provide a higher benefit level. However, because these plans represent such a large segment of the nation's public employees, we contend that this report provides a clear picture of overall trends in public sector retirement.

The 204 plans also represent the full scope of pension system reform. Some continue to offer the same benefit as the day the plan was first created. Others have completely or partially eliminated their DB plan and moved to a DB/DC hybrid or a sole DC system. Others have created new DB plan "tiers" without implementing any change in benefits for full-career retirees. And, in rare cases, plans have increased their DB plan benefits. The focus of this report is none of these circumstances.

Instead, we examine pension systems that have maintained a primary DB plan and reduced the expected benefit for full-career and early retirees. This group contains almost exactly half the plans in the sample (103 of 204), as shown in **Figure 1**. While much attention has been paid to the relatively small number of plans that have switched to a hybrid system, the impacts of reform to primary DB retirement systems quietly affect a much larger portion of the state and local government workforce.

Figure 1



Introducing Tier X

Each time a DB pension system is reformed, a new benefit "tier" is created. The new tier typically only affects new employees joining the organization after the date of reform, leaving intact the benefits for those who started employment before the changes took place.

The frequency of these changes depends on the circumstances affecting each plan and the political environment of each government. Different employee bargaining units may also be in different tiers within a retirement system, creating a labyrinth of possible outcomes for retirees within the same government. One state system in the sample contained more than 40 different DB pension tiers.

Whether a plan has two tiers or 40 is less important for this report than how much the benefit changed between the first and most recent tier. We focus on the most recent tier because this tier represents the current benefit each government is offering to attract new employees. This report refers to the most recent pension tier as "Tier X."

To show the change in benefit between tiers, we calculated the expected benefit for the first tier created in the retirement system (Tier 1) and the last (Tier X). We did not include an assumption of benefits over the duration of retirement, but simply show the benefit an employee in Tier 1 or Tier X would receive in their first year after retiring. Payouts for DB plans often change over time based on cost-of-living adjustments. These adjustments vary considerably between plans and often do not keep pace with inflation over time, meaning the benefit shown in our analysis likely represents the most purchasing power a public employee will have at any time in their retirement[6].

Tier *- A new "tier" is created each time a DB pension system is reformed.*

Tier X *- Most recent pension tier representing the current benefit each government is offering to attract new employees. This report focuses on Tier X.*

Two Retiree Scenarios

Any analysis of state and local government DB plans on a macro level must make several assumptions. Not only will different pension reforms produce different impacts on plan benefits, but nuanced differences in personal circumstances, such as the age of a beneficiary or timing of salary increases, could cause large differences in individual pay outs.

Anticipating each specific caveat for every individual in every plan is impossible and not necessary to illustrate the broader trends. This can be accomplished with two stylized examples that represent the retirement circumstances of typical full-career and early retiring public employees, as seen in Table 1.

DB benefits are typically calculated using a multiplier, final average salary, and years of tenure. Multipliers are specific to each plan and ranged from .167% to 3% in our sample. The final average salary is the average salary over a set number of years before retirement. This is also specific to each plan and ranged from two to eight years in our sample.

Reducing the multiplier has an obvious impact on final benefits received, but increasing the years used for final average salary calculations is a more subtle version of reform. Generally, the more years used, the lower the expected final average salary[7], though in our calculations we used a constant $70,000. Reducing the multiplier, increasing the number of years used to calculate final average salary, and eliminating early retirement provisions were the most common types of reform in our sample.

Finally, it should be acknowledged that the benefits shown in this study express close to a best-case scenario for public employees. Tenure is longer in the public sector and pension benefits have been shown to be an effective retention tool[8]. That said, many public employees never reach the years of service necessary to receive their full pension benefit[9]. This report does not consider the many employees who leave public service before reaching a tenure that guarantees a DB plan benefit.

Table 1

Public Sector Retirement Assumptions	Final Average Salary	Age	Years of Tenure
Non-Safety Full-Career Retirement	$70,000	62	30
Early Retirement (Full-Career for Safety)	$70,000	55	25
Retirement Benefit = Final Average Salary x Multiplier x Years of Tenure			

Safety and Non-Safety Plan Differences

The data from the 103 pension systems that reformed their DB plan but kept it as the primary retirement vehicle are broken into two categories: General employees (including teachers) and safety employees. For general employees, which we refer to as "non-safety," the data are calculated using both full-career and early retirement, as noted above. For safety employees, the data are calculated using only age 55 and 25 years of tenure.

We separate general government and safety retirement systems because they are often structured differently to account for different employee characteristics. Safety employees, in our analysis, are law enforcement or firefighters who typically retire much earlier than general employees and tend to receive more generous benefits[10], though they are far less likely to participate in Social Security[11].

What the Data Show

Eighty-six of the 103 plans that reduced their primary DB benefit were non-safety. Of the 86 non-safety plans, some reduced or eliminated early retirement benefits, some reduced full-career retirement benefits, and some did both. Early retirement benefits were the most reformed. Only 20 of the 86 plans maintained or raised their early retirement benefits, while 32 plans eliminated or never allowed early retirement, and another 34 significantly reduced early retirement benefits as shown in **Figure 2**.

Figure 3 shows the impact of DB reform on full-career retirement for non-safety plans. Fifty-one of the 86 reduced the DB plan benefit for those attaining 30 years of service.

Figure 2

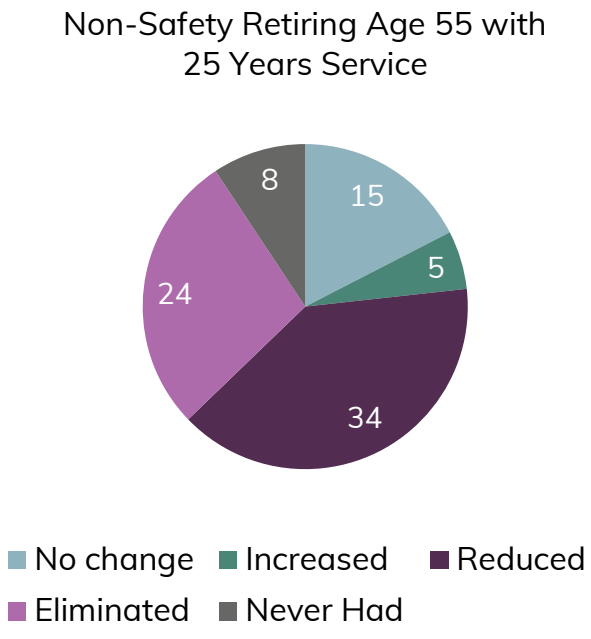


Figure 3

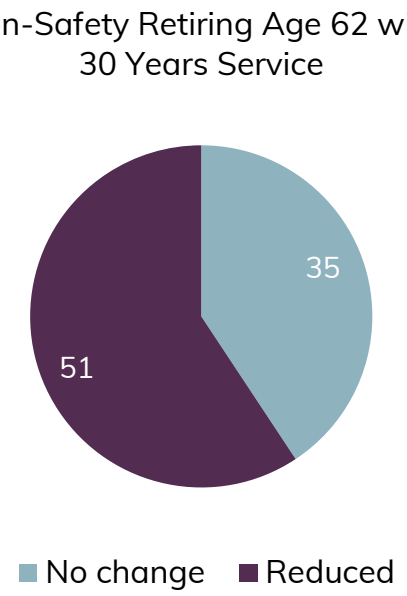


Figure 4 shows the reduction in the DB plan benefit from Tier 1 to Tier X of each respective non-safety pension plan for full-career retirement age. The median reduction among the 51 plans in the sample was over $6,500, or a more than $500 per month reduction from a public sector retiree's income.

Figure 4

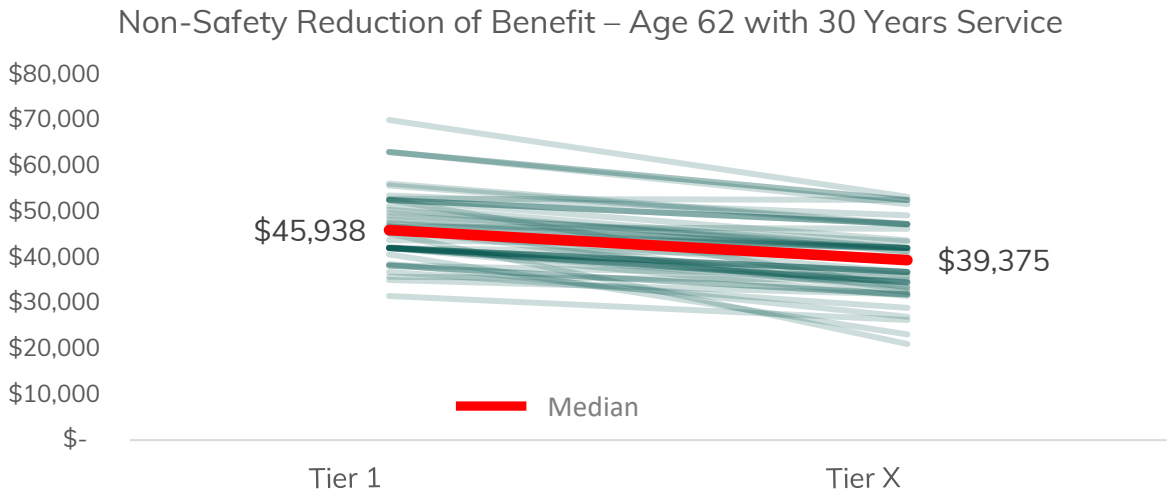


Figure 5 shows the distribution of the reduction of the DB plan benefit in the different plans in our stylized example. Most reforms reduced the full-career annual retirement benefits between $6,000 and $12,000.

Figure 5

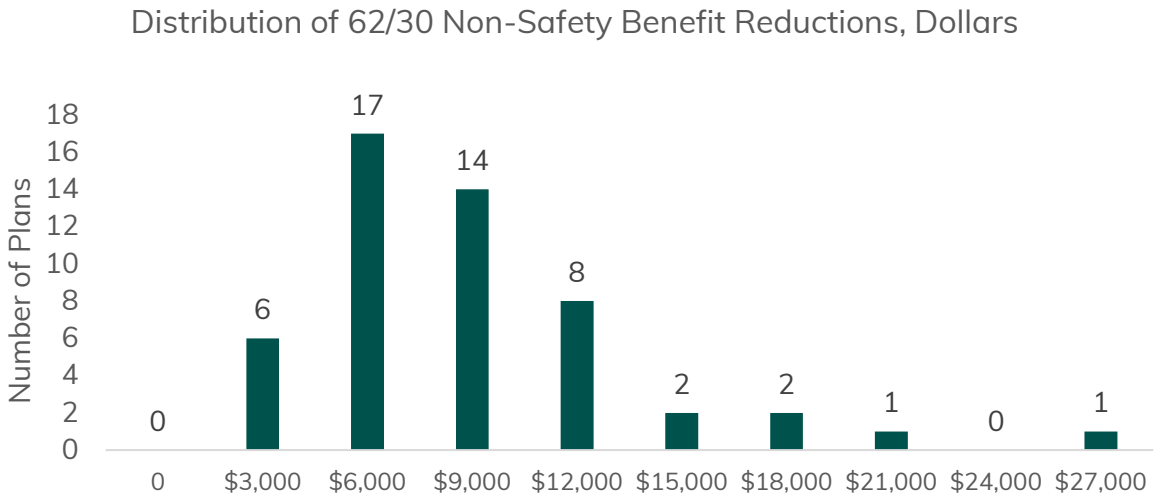
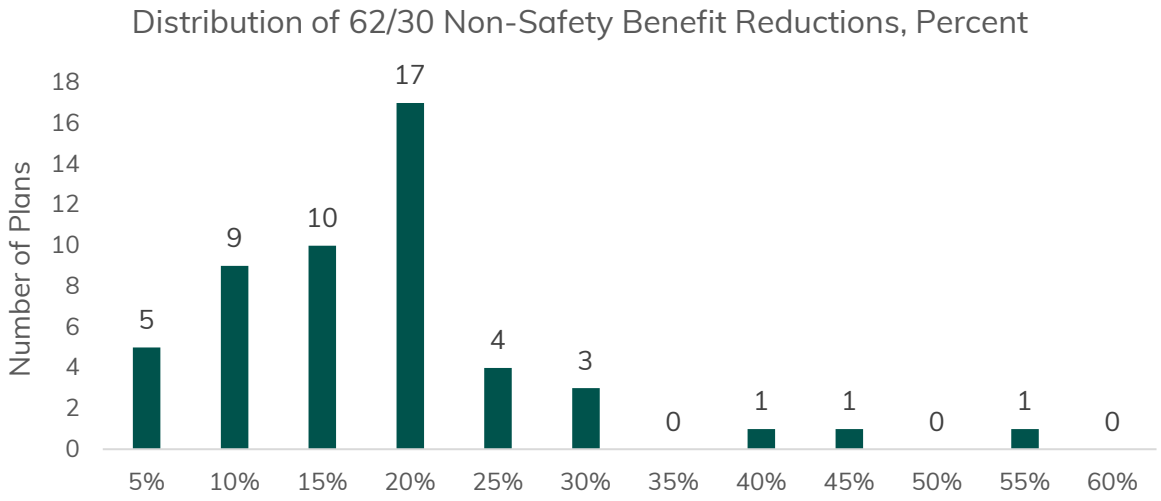


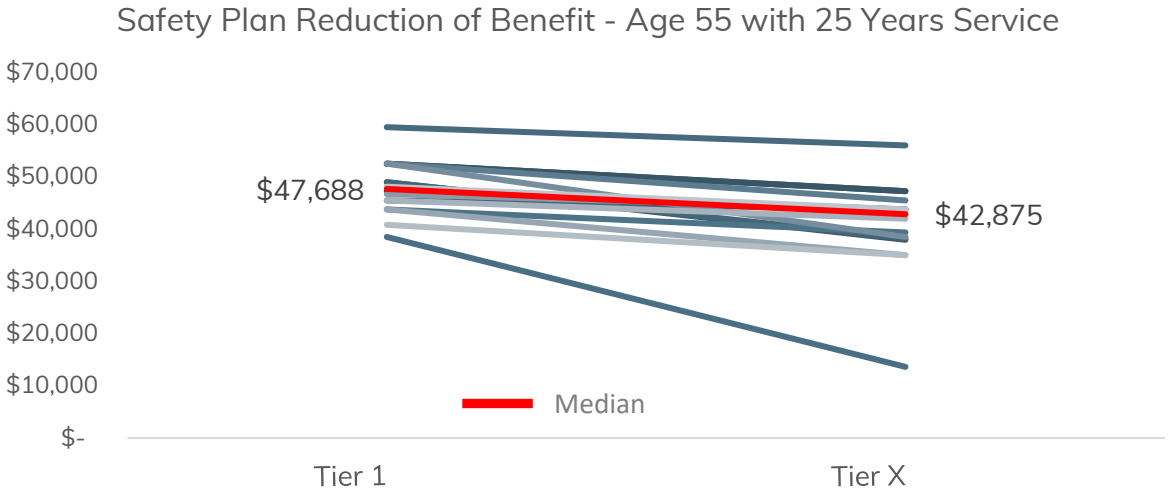
Figure 6 shows the reductions from reforms in percentage terms. The median reduction in retirement income for employees reaching full-career retirement was about 15%.

Figure 6



Forty-eight of the 72 "Safety" plans in our initial sample created a new DB tier. However, only 17 plans experienced reform that affected the benefit for employees reaching age 55 with 25 years of service. The median reduction for those 17 plans was less than $5,000, as shown in **Figure 7**.

Figure 7



What Does This Tell Us?

The reduction of DB retirement plan benefits for public employees is a common, though often under-recognized fact. Governments have made difficult fiscal decisions to shore up pension funding, which has resulted in lower expected benefits for many public employees, even when the DB plan remains primary. This situation will not change; new, less generous pension tiers are being created every year in governments across the country.

How should these findings be used? We contend that the time is now for public sector employers to change their thinking about retirement plans. For many employees, even a full career in the public sector will not provide the income they have come to expect from their DB plan. We offer a few important points for policy makers, administrators, employers, and employees to consider:

Reform Will Not Be Felt for Decades to Come

Most of the DB reforms addressed in this report have happened within the past decade, and all have happened within the last two. Many employees retiring today are still in Tier 1. Only when employees in Tier X begin to retire will the impact of a smaller pension check be fully realized.

Tier X Is the DB Plan

Common to all systems offering a DB pension is that the latest tier is the most relevant. Tier X, as we have labeled it, is the tool each public employer can use to attract new talent. Older pension tiers are not accessible to new employees and should not be the focus of retirement plan administrators or government leaders.

Public Sector Retirement Systems, Not Plans

NAGDCA is conducting this analysis because DC plan sponsors (the majority of our members) are heavily impacted by the results. Individual savings in DC plans is part of an integrated retirement system. For too long, the DB plan has been the sole focus of retirement systems, with DC plans simply viewed as a luxury. This is no longer the case for most public employees. The sooner employers use DB and DC plans in tandem to provide a secure retirement for employees, the better.

What's Next?

A broad reduction in DB benefits introduces several important questions we will explore in future reports. NAGDCA, in partnership with the Employee Benefits Research Institute, possesses a database of DC plan information that can answer questions no other entity can address. Among them are:

- **Are public employees in reformed retirement systems saving more in their DC plan than their peers with a more generous DB plan benefit?**
- **Are public employees in reformed retirement systems allocating their assets differently to offset a diminished DB plan benefit?**
- **Are DC guaranteed income investments more appealing to Tier X public employees with a lower DB plan benefit?**

Acknowledgments

The data for this project was generously provided by Still River Retirement Planning Software, Inc., a premier provider of customized calculations and analyses, software, and planning tools addressing needs-based, post-retirement income strategies in the public sector and beyond.

Endnotes

1 The National Association of State Retirement Administrators (NASRA) provides excellent analysis of DB reforms here: https://www.nasra.org/pensionreform.

2 NASRA also studied the effect of reform on benefits, but not since 2014. https://www.nasra.org/files/JointPublications/Effects%20of%20Pension%20Plans%20on%20Retirement%20Income.pdf.

3 A complete list of the plans in our sample is here: https://www.nagdca.org/wp-content/uploads/2023/04/Defined-Benefit-Retirement-Plans-Included-in-the-Analysis.pdf.

4 Author calculation from the Center for Retirement Research Public Plans Database: https://publicplansdata.org/public-plans-database/download-full-data-set/.

5 The Bureau of Labor Statistics publishes a monthly rollup of state and local government employment numbers in the last section of this table: https://www.bls.gov/news.release/empsit.t17.htm.

6 NASRA again provides an excellent resource here: https://www.nasra.org/files/Issue%20Briefs/NASRACOLA%20Brief.pdf.

7 Public sector salaries track closely to inflation. Private and public sector wages and their relationship to the Consumer Price Index since 2001 can be found here: https://fred.stlouisfed.org/graph/?g=Zb0V.

8 Public Retirement Research Lab (PRRL) research shows tenure in the public sector is nearly twice the median in the private sector: https://www.ebri.org/docs/default-source/prrl/research-studies/01-rs_tenure_7may2020.pdf.

9 Though it is not recent, The Center for Retirement Research at Boston College examined the impact of pension vesting here: https://crr.bc.edu/wp-content/uploads/2012/11/slp26-1.pdf.

10 General systems often contain a wide variety of employees, including teachers, transportation workers, judges, elected officials, etc. General systems may also include safety employees and in this analysis those safety employees would be included in the general population, as there is no way to separate them. A system designated as “safety” in this analysis is one that is only available to law enforcement or firefighters.

11 Police, fire, and teachers are the most likely employees to lack Social Security: https://crsreports.congress.gov/product/pdf/R/R46961/2.